

AMENDMENT

Application no.: 10/622,868

Filed: July 17, 2003

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

Claim 1. (Currently amended) A method of operating an external defibrillator that is configured to provide a defibrillation shock to a patient, comprising the steps of:

beginning to charge an energy storage device of the external defibrillator at an initial rate;

initiating a physiology analysis of the patient without human intervention after said beginning to charge said energy storage device; and

determining a second rate to charge an energy storage device based at least in part upon said physiology analysis;

charging said energy storage device at said second rate; and

applying the defibrillation shock to the patient without human intervention after said initiating said physiological analysis of the patient.

Claim 2. (Cancelled)

Claim 3. (Currently amended) The method of operating the external defibrillator that is configured to provide the defibrillation shock to the patient of claim 2 1, further comprising the steps of:

if said second rate is different from said initial rate, updating said charge rate from said initial rate to an updated said second rate to charging said energy storage device; and

charging said energy storage device at said updated rate.

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Claim 4. (Original) The method of operating the external defibrillator that is configured to provide the defibrillation shock to the patient of claim 1, further comprising the step of determining a physical parameter of the patient.

Claim 5. (Cancelled)

Claim 6. (Original) The method of operating the external defibrillator that is configured to provide the defibrillation shock to the patient of claim 4, wherein said physical parameter is a transthoracic impedance.

Claim 7. (Original) The method of operating the external defibrillator that is configured to provide the defibrillation shock to the patient of claim 1, wherein said physiology analysis is a ElectroCardioGram (ECG).

Claim 8. (Original) The method of operating the external defibrillator that is configured to provide the defibrillation shock to the patient of claim 1, further comprising the step of activating the external defibrillator prior to said beginning to charge said energy storage device.

Claims 9-16 (Cancelled)

Claim 17. (Original) A method of charging an energy storage device of an external defibrillator that is configured to provide a defibrillation shock to a patient, comprising the steps of:

measuring a physical parameter of the patient at about a first time instant (t_1);
determining a charge for the energy storage device at about a second time instant (t_2) that is at least partially based on said physical parameter;
completing a physiology analysis of the patient at about a sixth time instant (t_6);
determining a rate for charging said energy storage device to substantially achieve
said charge after about a fifth time instant (t_5) and before about a seventh

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time instant (t_7), said fifth time occurring before about said sixth time instant (t_6) and said seventh time instant (t_7) occurring after about said sixth time instant (t_6); and

beginning to charge said energy storage device at said rate at about a third time instant (t_3).

Claim 18. (Original) The method of charging the energy storage device of claim 17, further comprising the step of beginning said physiology analysis of the patient at about a fourth time instant (t_4).

Claim 19. (Original) The method of charging the energy storage device of claim 18, further comprising the step of activating said external defibrillator at an initial time instant (t_0).

Claim 20. (Original) The method of charging the energy storage device of claim 17, wherein said physical parameter is a transthoracic impedance.

Claim 21. (Original) The method of charging the energy storage device of claim 17, wherein said physiology analysis is an ElectroCardioGram (ECG) analysis.

Claim 22. (Currently amended) The method of charging the energy storage device of claim 19, wherein said seventh time instant (t_7) is greater later than said sixth time instant (t_6), said sixth time instant (t_6) is greater later than said fifth time instant (t_5), said fifth time instant (t_5) is greater later than said fourth time instant (t_4), said fourth time instant (t_4) is greater later than said third time instant (t_3), said third time instant (t_3) is greater later than said second time instant (t_2), said second time instant (t_2) is greater later than said first time instant (t_1), and said first time instant (t_1) is greater later than said initial time instant (t_0).

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Claim 23. (Original) The method of charging the energy storage device of claim 19, wherein said fourth time instant (t_4) is substantially equal to said third time instant (t_3).

Claim 24. (Original) The method of charging the energy storage device of claim 17, wherein said fifth time instant (t_5) is within about two (2) seconds of said sixth time instant (t_6).

Claim 25. (Original) The method of charging the energy storage device of claim 17, wherein said seventh time instant (t_7) is within about two (2) seconds of said sixth time instant (t_6).

Claims 26-34 (Cancelled)

Claim 35. (Currently amended) A method of charging an energy storage device of an external defibrillator that is configured to provide a defibrillation shock to a patient, comprising the steps of:

initiating a physiology analysis of the patient ~~at about a first time instant (t_1)~~;
completing said physiology analysis of the patient ~~at about a sixth time instant (t_6)~~;
initiating a charge of said energy storage device ~~at about a fourth time instant (t_4)~~,
~~said fourth time instant (t_4) occurring after said initiating said physiology analysis~~ ~~at about said first time instant (t_1)~~ and before said completing said physiology analysis ~~at about said sixth time instant (t_6)~~; and
determining a rate for charging said energy storage device to substantially complete said charging at a desired point in time; and
applying the defibrillation shock to the patient without human intervention. ~~at about a seventh time instant (t_7) occurring after said initiating said charge of said energy storage device at about said fourth time instant (t_4)~~

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Claim 36. (Currently amended) The method of charging the energy storage device of claim 35, further comprising:

prior to the step of determining a rate for charging, measuring a physical parameter of the patient ~~at about a first time instant (t₂)~~; ~~and~~
~~determining a charge for the energy storage device at about a third time instant (t₃) that is at least partially based on said physical parameter;~~ ~~and~~
~~determining a rate for charging said energy storage device to substantially achieve said charge after about a fifth time instant (t₅) and before about said seventh time instant (t₂), said fifth time instant (t₅) occurring before about said sixth time instant (t₆) and said seventh time instant (t₇) occurring after about said sixth time instant (t₆).~~

Claim 37. (Original) The method of charging the energy storage device of claim 36, further comprising the step of activating said external defibrillator at an initial time instant (t₀).

Claim 38. (Original) The method of charging the energy storage device of claim 35, wherein said physical parameter is a transthoracic impedance.

Claim 39. (Original) The method of charging the energy storage device of claim 35, wherein said physiology analysis is a ECG analysis.

Claim 40. (Cancelled)

Claim 41. (Currently amended) The method of charging the energy storage device of claim 36, wherein the step of determining a charge rate ~~said fifth time instant (t₅)~~ is within about two (2) seconds of the step of completing said physiology analysis ~~said sixth time instant (t₆)~~.

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Claim 42. (Currently amended) The method of charging the energy storage device of claim 36, wherein the step of applying the defibrillation shock said seventh time instant (t_7) is within about two (2) seconds of the step of determining a charge rate said sixth time instant (t_6).

Claims 43-83 (Cancelled)

Claim 84. (New) A method of operating an external defibrillator that is configured to provide a defibrillation shock to a patient, comprising the steps of:
beginning to charge an energy storage device of the external defibrillator at an initial rate;
initiating a physiology analysis of the patient after said beginning to charge said energy storage device; and
determining a rate to charging an energy storage device based at least in part upon said physiology analysis;
charging said energy storage device at said determined rate; and
applying the defibrillation shock to the patient after said initiating said physiological analysis of the patient.

Claim 85. (New) The method of operating the external defibrillator of claim 84, further comprising the steps of:

if said determined rate is different from said initial rate, updating said charge rate from said initial rate to said determined rate.

Claim 86. (New) The method of operating the external defibrillator of claim 84, further comprising the step of determining a physical parameter of the patient.

Claim 87. (New) The method of operating the external defibrillator of claim 86, wherein said physical parameter is a transthoracic impedance.

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Claim 88. (New) The method of operating the external defibrillator of claim 84, wherein said physiology analysis is an ECG analysis.

89. (New) The method of operating the external defibrillator of claim 84, further comprising the step of activating the external defibrillator prior to the step of beginning to charge said energy storage device.

Claim 90. (New) The method of claim 84 wherein the defibrillator is a manual defibrillator.

Claim 91. (New) A method of charging an energy storage device of an external defibrillator that is configured to provide a defibrillation shock to a patient, comprising the steps of:

initiating a physiology analysis of the patient;
completing said physiology analysis of the patient;
initiating a charge of said energy storage device after said initiating said physiology analysis and before said completing said physiology analysis;
determining a rate for charging said energy storage device to substantially complete said charging at a desired point in time; and
applying the defibrillation shock to the patient.

Claim 92. (New) The method of charging the energy storage device of claim 91, further comprising:

prior to the step of determining a rate for charging, measuring a physical parameter of the patient; and
determining a charge for the energy storage device that is at least partially based on said physical parameter.

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Claim 93. (New) The method of charging the energy storage device of claim 92, further comprising the step of activating said external defibrillator at an initial time instant (t_0).

Claim 94. (New) The method of charging the energy storage device of claim 91, wherein said physical parameter is a transthoracic impedance.

Claim 95. (New) The method of charging the energy storage device of claim 91, wherein said physiology analysis is a ECG analysis.

Claim 96. (New) The method of charging the energy storage device of claim 92, wherein the step of determining a charge rate is within about two (2) seconds of the step of completing said physiology analysis.

Claim 97. (New) The method of charging the energy storage device of claim 92, wherein the step of applying the defibrillation shock is within about two (2) seconds of the step of determining a charge rate.

Claim 98. (New) The method of claim 91 wherein the defibrillator is a manual defibrillator.